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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,514	12/21/2000	Paul V. Phibbs	5218.87	1007

20792 7590 09/09/2003

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EXAMINER

GIBBS, TERRA C

ART UNIT	PAPER NUMBER
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1635

DATE MAILED: 09/09/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/747,514

Applicant(s)

PHIBBS ET AL.

Examiner

Terra C. Gibbs

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) g.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Applicant's Amendment, filed on June 13, 2003 is acknowledged.

Claims 4 and 10-15 have been canceled.

Claims 1-3 and 5-9 are pending in the instant application.

### ***Specification***

The replacement Abstract of the Disclosure to contain clear and concise language is acknowledged. However, the Abstract of the Disclosure as amended contains improper language and format for an abstract of the disclosure. The Abstract as amended contains "said bacteria". Applicant is reminded that the form and legal phraseology often used in patent claims, such as "said," should be avoided.

### ***Claim Rejections - 35 USC § 112***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 8 was rejected under 35 U.S.C. 112, second paragraph, because the term "combinatorial library" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. This rejection is withdrawn in view of Applicants arguments that the term "combinatorial library" is an art recognized term and one of ordinary

skill in the art would be reasonably apprised of the scope of the invention, filed June 13, 2003 in Paper No. 13.

*Claim Rejections - 35 USC § 112*

Claims 1-3 and 5-9 were rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is withdrawn in view of the discussion during the Interview Summary on or around May 14, 2003, filed May 14, 2003 in Paper No. 12 and Applicants arguments that the claims of record are directed to methods of screening compounds and not to compounds *per se* or methods of using such compounds, filed June 13, 2003 in Paper No. 13.

*Claim Rejections - 35 USC § 103*

Claims 1-3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al. (a), Bright et al. (b), and further in view of Mahan et al., MacGregor et al., O'Toole et al., and Arrow et al. This rejection is withdrawn in view of Applicants Amendment to claim 1 to recite:

A method of screening for compounds that inhibit the virulence of *Pseudomonas* bacteria, comprising the steps of providing a culture medium comprising *Pseudomonas* bacteria and an amidase operon repressor, wherein the culture medium contains fluoroacetamide in an amount toxic to said bacteria in the absence of said amidase operon repressor; administering a test compound to said bacteria; and then detecting the poisoning of said bacteria by said fluoroacetamide, wherein the poisoning of said bacteria by said fluoroacetamide indicates said test compound has antivirulence activity against *Pseudomonas* bacteria,

filed June 13, 2002 in Paper No. 13. However, amendment necessitated the new ground(s) of rejection presented below:

Claims 1, 2, 3, 8, and 9 are rejected under 35 U.S.C. 103(a) as being anticipated by Wolf et al. (Journal of Bacteriology, 1991 Vol. 173:4700-4706) in view of O'Toole et al. (Journal of Bacteriology, 2000 Vol. 182:425-431).

Claim 1 is drawn to a method of screening for compounds that inhibit the virulence of *Pseudomonas* bacteria, comprising the steps of providing a culture medium comprising *Pseudomonas* bacteria and an amidase operon repressor, wherein the culture medium contains fluoroacetamide in an amount toxic to said bacteria in the absence of said amidase operon repressor; administering a test compound to said bacteria; and then detecting the poisoning of said bacteria by said fluoroacetamide, wherein the poisoning of said bacteria by said fluoroacetamide indicates said test compound has antivirulence activity against *Pseudomonas* bacteria. Claims 2, 3, 8, and 9 depend from claim 1 and include all the limitations of claim 1, wherein said *Pseudomonas* bacteria is *Pseudomonas aeruginosa*; wherein said test compound is a member of a combinatorial library; and wherein said test compound is an oligonucleotide.

Wolf et al. teach the growth of the *Pseudomonas aeruginosa* wild type and mutants on minimal medium containing lactamide, ammonium sulfate, and succinate (see Figure 4).

Wolf et al. do not teach a culture medium comprising fluoroacetamide.

O'Toole et al. teach fluoroacetamide sensitivity acts as an indirect assay of Crc function (see page 428, last paragraph). O'Toole et al. disclose the growth of the *Pseudomonas aeruginosa* wild type, the *crc-24* mutant, and the *crc-24* mutant carrying pSMC31 (*crc+*) on minimal medium containing succinate with or without fluoroacetamide (see Figure 4).

It would have been prima facie obvious to one of ordinary skill in the art at the time of filing to combine the teachings of Wolf et al. with O'Toole et al. to devise a method of screening for compounds that inhibit the virulence of *Pseudomonas* bacteria, comprising the steps of providing a culture medium comprising *Pseudomonas* bacteria and an amidase operon repressor, wherein the culture medium contains fluoroacetamide in an amount toxic to said bacteria in the absence of said amidase operon repressor; administering a test compound to said bacteria; and then detecting the poisoning of said bacteria by said fluoroacetamide, wherein the poisoning of said bacteria by said fluoroacetamide indicates said test compound has antivirulence activity against *Pseudomonas* bacteria. One of ordinary skill in the art would have been motivated to include fluoroacetamide in the culture medium since O'Toole et al. taught fluoroacetamide as an indirect assay of detecting Crc function. One of ordinary skill in the art would have expected success in devising a method of screening for compounds that inhibit the virulence of *Pseudomonas* bacteria, comprising the steps of providing a culture medium comprising *Pseudomonas* bacteria and an amidase operon repressor, wherein the culture medium contains fluoroacetamide in an amount toxic to said bacteria in the absence of said amidase operon repressor; administering a test compound to said bacteria; and then detecting the poisoning of said bacteria by said fluoroacetamide, wherein the poisoning of said bacteria by said fluoroacetamide indicates said test compound has antivirulence activity against *Pseudomonas* bacteria because collectively Wolf et al. and O'Toole et al. explicitly taught each step in such method.

It is emphasized that the claimed method, as recited, has only 3 steps – providing culture media comprising *Pseudomonas* bacteria, an amidase operon repressor and fluoroacetamide,

adding a test compound, and detecting poisoning of said bacteria. In totality, the references render the instant application obvious and demonstrate that one of ordinary skill in the art would have been motivated and expected success in making and using the current invention at the time of filing.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 3, 8, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by O'Toole et al. (Journal of Bacteriology, 2000 Vol. 182:425-431).

Claim 1 is drawn to a method of screening for compounds that inhibit the virulence of *Pseudomonas* bacteria, comprising the steps of providing a culture medium comprising *Pseudomonas* bacteria and an amidase operon repressor, wherein the culture medium contains fluoroacetamide in an amount toxic to said bacteria in the absence of said amidase operon repressor; administering a test compound to said bacteria; and then detecting the poisoning of said bacteria by said fluoroacetamide, wherein the poisoning of said bacteria by said fluoroacetamide indicates said test compound has antivirulence activity against *Pseudomonas* bacteria. Claims 2, 3, 8, and 9 depend from claim 1 and include all the limitations of claim 1, wherein said *Pseudomonas* bacteria is *Pseudomonas aeruginosa*; wherein said test compound is a member of a combinatorial library; and wherein said test compound is an oligonucleotide.

O'Toole et al. disclose the growth of the *Pseudomonas aeruginosa* wild type, the crc-24 mutant, and the crc-24 mutant carrying pSMC31 (*crc*+) on minimal medium containing succinate with or without fluoroacetamide (see Figure 4).

It is emphasized that the claimed method, as recited, has only 3 steps – providing culture media comprising *Pseudomonas* bacteria, an amidase operon repressor and fluoroacetamide, adding a test compound, and detecting poisoning of said bacteria. O'Toole et al. recites all of these steps. Therefore, O'Toole et al. anticipate the instant invention.

#### ***Claim Objections***

Claims 5, 6, and 7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent cannot depend on a rejected claim. See MPEP § 608.01(n). Accordingly, claims 5, 6, and 7 have not been further treated on the merits.

#### ***Information Disclosure Statement***

It is noted that the Information Disclosure Statement, filed May 10, 2001 in Paper No. 8 had several references that were not initialed off by the Examiner. A copy of the PTO-1449 form, filed May 10, 2001, with all the references initialed by the Examiner is attached.

#### ***Conclusion***

No claims are allowable.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terra C. Gibbs whose telephone number is (703) 306-3221. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John L. LeGuyader can be reached on (703) 308-0447. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

tcg  
August 18, 2003

  
KAREN A. LACOURCIERE, PH.D  
PRIMARY EXAMINER